REMARKS

The present application was originally filed with 13 Claims. In a Supplemental Preliminary Amendment mailed September 21, 2001, Claims 1-6 and 11-13 were cancelled without prejudice and Claims 14-27 were added. Thus, Claims 7-10 and 14-27 were pending. In a Restriction Requirement mailed September 27, 2002, the Examiner restricted the Claims into three Groups, with Claims 7-10 and 14-15 in Group I, Claims 7-8 and 14-15 in Group II, and Claims 16-27 in Group III. In a Response filed October 9, 2002, Applicants elected the Claims in Group I with traverse, and cancelled Claims 16-27. As indicated in the present Final Office Action, 7-10 and 14-15 are pending in the present application.

Applicants appreciatively note that the Examiner has removed his previous objections to the Specification and Claims. Applicants also note that the Examiner has removed various rejections previously made. The Examiner's present rejections are addressed in the following order.

1) Claims 7-10 and 14-15 stand rejected under 35 U.S.C. §112, second paragraph, as allegedly being indefinite;

2) Claim 7 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Carr *et al.* (WO 98/52976);

3) Claim 7 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Barstad *et al.* (5,268,454); and

4) Claim 7 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Estell (WO 99/53078).

1) The Claims are Definite

The Examiner has rejected Claims 7-10 and 14-15 under 35 U.S.C. §112, second paragraph, as allegedly being indefinite. The Examiner argues that the Claims "have not been amended to encompass only the elected embodiment (a variant producing a lower immunogenic response)." (Final Office Action, page 2). While Applicants believe that the Claims as presented were definite, in order to further the prosecution of the present application and Applicant's business interests, Applicants have amended the Claims to recite that the variant produces a reduced immunogenic response, as compared to the polypeptide of interest. In addition, Applicants have amended the Claims to recite that the polypeptide of interest is an enzyme. As there is more than sufficient support in the Specification as filed for these

amendments, no new matter has been added. Applicants reserve the right to pursue the originally filed and/or broader Claims in subsequent application(s). None of the amendments to the Claims is intended to narrow the scope of any of the amended Claims within the meaning of *Festo* (*supra*). Applicants respectfully submit that the Claims are definite and request that this rejection be withdrawn and the Claims passed to allowance.

2-4) The Claims are Novel

The Examiner has rejected Claim 7 under 35 U.S.C. §102(b) as allegedly being anticipated by Carr *et al.* (WO 98/52976), while Claim 7 stands rejected under 35 U.S.C. §102(b) as allegedly being anticipated by Barstad *et al.* (5,268,454) and Estell (WO 9953078).

2) Claim 7 is Novel Over Carr *et al.* (WO 98/52976; "Carr *et al.*")

The Examiner argues that Claim 7 is anticipated because Carr *et al.* teach "a streptokinase having substitutions within T-cell epitopes to render them less immunogenic." (Office Action, page 3). The Examiner further argues that the instant claims are not entitled to the filing date of Appln. Ser. No. 09/060,872, filed April 15, 1998, because "the amended version of claim 7 recites numerous Markush group members at the conclusion of the claim which cannot be supported by the disclosure of 060,872; at the earliest, the instant claims have an effective filing date of parent application 09/500,135 filed on 2/28/00." (Office Action, page 3). While Applicants must respectfully disagree with the Examiner's arguments, Applicants have amended Claim 7 to recite that the polypeptide of interest is an enzyme. There is more than sufficient support in the present Specification as filed, as well as the parent application, *and* US Appln. Ser. No. 09/060,872 for this recitation. For example, throughout the Specification of US Appln. Ser. No. 09/060,872, proteins are described as the polypeptide of interest. Furthermore, enzymes are specifically recited, including proteases and amylases (*See e.g.*, pages 5, 7, 8, and 12 of US Appln. Ser. No. 09/060,872). Thus, amended Claim 7 is entitled to the priority date of US Appln. Ser. No. 09/060,872, which predates the Carr *et al.* publication.

Indeed, Applicants respectfully submit that Carr *et al.* is **NOT** prior art which is citable against the present application. Carr *et al.* was published on November 26, 1998, while the present application claims priority benefit to US Appln. Ser. No. 09/060,872, filed April 15, 1998. Thus, as the priority application was filed more than seven months BEFORE Carr *et al.* was

published as a PCT application. The present application and Claims find support in the originally filed Application Ser. No. 09/060,872. Thus, Carr *et al.* is not prior art as to the present application and Applicants respectfully request that this rejection be withdrawn.

3) Claim 7 is Novel Over Barstad *et al.*

The Examiner has rejected Claim 7 under 35 U.S.C. §102(b) as allegedly being anticipated by Barstad *et al.* (US Patent No. 5,268,454). In particular, the Examiner argues that "Barstad et al teach analogs of a polypeptide immunogen which retains B-cell epitopes but which lacks T-cell epitopes. The latter are eliminated by chemical derivitization or are partially or completely deleted from the sequence. . . ." The Examiner argues that "the phrase 'comprising a T-cell of interest' is considered to describe "the polypeptide of interest" before it has been altered by substitutions, deletions, etc." (Office Action, page 4).

Applicants must respectfully disagree with the Examiner's arguments as they apply to the presently claimed invention. Contrary to Barstad *et al.*, the present invention recites a polypeptide of interest and variant polypeptide of interest that ***comprise*** a T-cell epitope, albeit the variant polypeptide has an altered T-cell epitope. Indeed, Barstad *et al.* teach away from the presently claimed invention, as their invention involves immunogens that **LACK** T-cell epitopes. The Examiner states that "[n]othing in the disclosure of applicant negates the elimination of all T-cell epitopes, and nothing requires the presence of a T-cell epitope in the claimed variant." (Office Action, page 4). Applicans must strongly disagree with the Examiner's characterization of the presently claimed invention. The entire focus of the claimed invention is on polypeptides that contain T-cell epitope(s) that have been altered so as to produce a different (*i.e.*, reduced) immunogenic response than the original polypeptide of interest. Thus, contrary to the Examiner's characterization, Applicants' invention as claimed **REQUIRES** T-cell epitope(s). Indeed, the Specification as filed teaches that polypeptides of interest that lack T-cell epitopes may be modified using the methods described in the Specification to produce T-cell epitopes and that these altered polypeptides having T-cell epitopes are used (*See e.g.*, page 4, lines 14-17). Furthermore, as Claim 7 no longer recites "hormones" as a polypeptide of interest, the description in Barstad *et al.* of thyroglobulin as an immunogen does not anticipate the present Claim.

In order for the Barstad *et al.* reference (or any other reference) to anticipate the presently claimed invention, the reference MUST disclose each and every element of the

claimed invention[2]. In contrast to Barstad *et al.*, which requires the **absence** of T-cell epitopes, the presently claimed invention requires the **presence** of T-cell epitopes. Indeed, the Barstad *et al.* reference *teaches away* from the presently claimed invention. In addition, the description of thyroglobulin by Barstad *et al.* does not anticipate the present Claims. Applicants respectfully submit that contrary to the Examiner's assertions, the presently claimed invention is not anticipated by Barstad *et al.*, and request that this rejection be withdrawn.

4) The Claims are Novel Over Estell (WO 99/53078)

The Examiner has rejected Claim 7 under 35 U.S.C. §102(b) under Estell (WO 99/53078). The Examiner argues that "Estell teaches subtilisins (i.e., enzymes) that have modified T-cell epitopes with a lowered immunogenicity." (Office Action, page 4). The Examiner further argues that this citation is proper because the instant inventive entity differes from WO 99/53078. Applicants respectfully submit that as with Carr *et al.* reference, the Estell reference is **NOT** prior art, as the present Claims are entitled to the priority date of US Appln. Ser. No. 09/060,872, filed April 15, 1998 (as discussed above). The publication date of the Estell publication is October 21, 1999, well after the priority date of the present Claims. Thus, Applicants respectfully request that this rejection be withdrawn and the present Claims be passed to allowance.

[2] "[A]nticipation is established only when a single prior art reference discloses, expressly or under principles of inherency, each and ev ry element of a claimed invention." *RCA Corp. v. applied Digital Data Sys., Inc.*, 730 F.2d 1440, 221 USPQ 385, 388 (Fed. Cir. 1984).

CONCLUSION

In light of the above remarks, the Applicants believe the pending claims are in condition for allowance and issuance of a formal Notice of Allowance at an early date is respectfully requested. If a telephone conference would expedite prosecution of this application, the Examiner is invited to telephone the undersigned at (650) 846-5838.

Respectfully submitted,

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